

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference RPH.P53199WO	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/EP2004/052167	International filing date (day/month/year) 14/09/2004	(Earliest) Priority Date (day/month/year) 19/09/2003
Applicant WEATHERFORD/LAMB, INC.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. Certain claims were found unsearchable (See Box II).3. Unity of invention is lacking (see Box III).

4. With regard to the title,

the text is approved as submitted by the applicant.

the text has been established by this Authority to read as follows:

5. With regard to the abstract,

the text is approved as submitted by the applicant.

the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regards to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. 14

as suggested by the applicant.

as selected by this Authority, because the applicant failed to suggest a figure.

as selected by this Authority, because this figure better characterizes the invention.

b. none of the figures is to be published with the abstract.

III

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/052167

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 E21B19/00 E21B33/08

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 E21B F16K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 263 982 B1 (HANNEGAN DON M ET AL) 24 July 2001 (2001-07-24) column 4, line 46 - column 5, line 53; claims 1,5,26; figures 1-8	1,2,5-7, 10,14,18
Y	column 4, line 34 - column 5, line 64; claims 1,26; figures 1-8	3,4,8,9, 11-13, 19,20
Y	US 5 076 364 A (HALE ARTHUR H ET AL) 31 December 1991 (1991-12-31) column 12, lines 49-55	3,4,8,9, 11-13, 19,20
A	WO 00/52299 A (HARDING RICHARD PATRICK ; HANNEGAN DON M (US); BOURGOYNE DARRYL A (US)) 8 September 2000 (2000-09-08) the whole document	1-20 -/-

Further documents are listed in the continuation of box C.

Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

Z document member of the same patent family

Date of the actual completion of the international search

25 November 2004

Date of mailing of the international search report

02/12/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl.
Fax (+31-70) 340-3016

Authorized officer

Manolache, I

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2004/052167

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 4 709 900 A (DYHR EINAR) 1 December 1987 (1987-12-01) the whole document -----	1-20

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/EP2004/052167

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US 6263982	B1 24-07-2001	US	6138774 A	31-10-2000
		AU	765178 B2	11-09-2003
		AU	2818100 A	21-09-2000
		CA	2363495 A1	08-09-2000
		EP	1175549 A1	30-01-2002
		WO	0052300 A1	08-09-2000
		NO	20013952 A	10-10-2001
		US	2004178001 A1	16-09-2004
		US	2001040052 A1	15-11-2001
		AU	752847 B2	03-10-2002
		AU	2782299 A	20-09-1999
		BR	9908418 A	02-01-2002
		CA	2322287 A1	10-09-1999
		EP	1060320 A1	20-12-2000
		NO	20003950 A	24-10-2000
		WO	9945228 A1	10-09-1999
US 5076364	A 31-12-1991	NONE		
WO 0052299	A 08-09-2000	AU	764993 B2	04-09-2003
		AU	2818300 A	21-09-2000
		CA	2363132 A1	08-09-2000
		EP	1157189 A1	28-11-2001
		WO	0052299 A1	08-09-2000
		NO	20013953 A	03-10-2001
		US	2003106712 A1	12-06-2003
		US	6470975 B1	29-10-2002
US 4709900	A 01-12-1987	DK	162885 A	12-10-1986
		AT	71442 T	15-01-1992
		DE	3683309 D1	20-02-1992
		DK	95886 A	12-10-1986
		EP	0199669 A2	29-10-1986
		JP	61290193 A	20-12-1986
		KR	9207709 B1	15-09-1992
		NO	860821 A ,B,	13-10-1986